

In the Claims:

1. (currently mended) An actuator assembly for a firearm, comprising:
  - a unitary trigger assembly having a body and a trigger formed with and projecting from said body and adapted to be engaged by a user to initiate an operational sequence;
  - a measuring device positioned adjacent said trigger for measuring a force applied to said trigger by the user and generating a trigger signal for initiating the operational sequence;
  - a compensating system for compensating for inadvertent trigger signals; and
  - a controller in communication with said measuring device and said compensating system for receiving and processing said trigger signal and initiating the operational sequence in response to a valid trigger signal.
2. (original) The actuator assembly of claim 1 and wherein said compensating system comprises a second measuring device for generating a compensating signal.
3. (original) The actuator assembly of claim 2 and wherein said second measuring device generates a compensating signal in response to application of a force or changes in environmental conditions detected by said second measuring device.
4. (original) The actuator assembly of claim 2 and wherein said compensating system further comprises a compensating mass and wherein said second measuring device is mounted adjacent said compensating mass for generating said compensating signal.

5. (currently amended) The actuator assembly of claim ~~1~~ 2 and wherein said compensating system includes a filter for filtering out a trigger signal occurring at a rate of change in said trigger signal that is outside of a desired preset range for the rate of change for said trigger signal to initiate the firing sequence.
6. (original) The actuator assembly of claim 3 and wherein said compensating system further comprises an amplifier for combining said compensating signal with said trigger signal and producing a composite signal for enabling initiation of the operational sequence if said composite signal is within an acceptable threshold range.
7. (original) The actuator assembly of claim 6 and further including a reference signal to which said composite signal is compared to enable initiation of the operational sequence if said composite signal exceeds said reference signal.
- 8 – 9 (cancelled)
10. (original) The actuator assembly of claim 4 and further comprising a compensating cantilever extending from said body and supporting said compensating mass.
11. (original) The actuator assembly of claim 1 and further comprising a trigger cantilever connecting said trigger to said body.

12. (original) The actuator assembly of claim 1 and further comprising a sensitivity increasing feature formed along said body adjacent said first measuring device for localizing the force applied to said trigger for detection by said first measuring device.

13. (original) The actuator assembly of claim 12 and wherein said sensitivity increasing feature comprises a notch, cavity or raised portion formed in said body.

14 – 17 (cancelled)

18. (original) The actuator assembly of claim 1 and further comprising an electrically conductive probe in communication with a power supply for directing a firing voltage to a round of electrically activated ammunition.

19. (original) The actuator assembly of claim 1 and further including a firing pin and an engagement mechanism blocking movement of said firing pin toward a round of percussion primed ammunition, and wherein said engagement mechanism is disengaged from said firing pin to enable said firing pin to engage and initiate the firing of the round of percussion primed ammunition upon receipt of said trigger signal by said controller.

20. (original) The actuator assembly of claim 1 and further comprising a firing pin and an actuator in communication with the firing pin for moving the firing pin to a firing position for firing a round of percussion primed ammunition in response to a firing signal received from said controller upon actuation of said trigger by a user.

21 – 38 (cancelled)

39. (new) An actuator, comprising:

- a trigger assembly having a body and a trigger projecting from said body, for initiating an operational sequence;
- a first measuring device positioned adjacent said trigger for detecting engagement of said trigger and generating a trigger signal;
- a second measuring device for generating a compensating signal in response to an application of force, inappropriate movement or changes in environmental conditions;
- a control system in communication with said first and second measuring devices for receiving and processing said trigger signal and said compensating signal, determining validity of said trigger signal, and initiating the operational sequence in response to a valid trigger signal.

40. (new) The actuator assembly of claim 39 and wherein said compensating system further comprises a compensating mass and wherein said second measuring device is mounted adjacent said compensating mass for generating said compensating signal.

41. (new) The actuator assembly of claim 40 and further comprising a compensating cantilever extending from said body and supporting said compensating mass.

42. (new) The actuator assembly of claim 39 and further comprising a trigger cantilever connecting said trigger to said body.
43. (new) The actuator assembly of claim 39 and further comprising a filter for filtering out a trigger signal occurring at a rate of change in said trigger signal that is outside of a desired preset range for the rate of change for said trigger signal to initiate the operational sequence.
44. (new) The actuator assembly of claim 39 and further comprising an amplifier for combining said compensating signal with said trigger signal and producing a composite signal for enabling initiation of the operational sequence if said composite signal is within an acceptable threshold range.
45. (new) The actuator assembly of claim 39 and further comprising a sensitivity increasing feature formed along said body adjacent said first measuring device for localizing a force applied to said trigger for detection by said first measuring device.